

Name: _____

at1110paper__practice__test (v7)

1. Expand the following expression into standard form.

$$(3x + 4)(5x + 9)$$

$$15x^2 + 27x + 20x + 36$$

$$15x^2 + 47x + 36$$

2. Solve the equation.

$$(9x + 4)(7x + 8) = 0$$

$$x = \frac{-4}{9} \quad x = \frac{-8}{7}$$

3. Expand the following expression into standard form.

$$(3x + 8)(3x - 8)$$

$$9x^2 - 24x + 24x - 64$$

$$9x^2 - 64$$

4. Expand the following expression into standard form.

$$(5x - 2)^2$$

$$25x^2 - 10x - 10x + 4$$

$$25x^2 - 20x + 4$$

5. Factor the expression.

$$x^2 + 5x - 14$$

$$(x - 2)(x + 7)$$

6. Factor the expression.

$$36x^2 - 49$$

$$(6x + 7)(6x - 7)$$

7. Solve the equation with factoring by grouping.

$$8x^2 + 6x + 20x + 15 = 0$$

$$(2x + 5)(4x + 3) = 0$$

$$x = \frac{-5}{2} \quad x = \frac{-3}{4}$$

8. Solve the equation.

$$10x^2 - 37x - 58 = 3x^2 + 4x - 2$$

$$7x^2 - 41x - 56 = 0$$

$$(7x + 8)(x - 7) = 0$$

$$x = \frac{-8}{7} \quad x = 7$$